CLAIMS:

What is claimed is:

1. A reduced sensitivity spin valve sensor apparatus, comprising:

a spin valve sensor; and

a pair of magnetic shields, wherein a spacing between the spin valve sensor and each magnetic shield of the pair of magnetic shields is reduced relative to standard spin valve sensor apparatus to thereby reduce a flux injection efficiency of the spin valve sensor.

2. The reduced sensitivity spin valve sensor apparatus of claim 1, wherein the spacing between the spin valve sensor and each magnetic shield is reduced by decreasing a thickness of an insulating layer between the spin valve sensor and the magnetic shields.

3. A spin valve sensor apparatus, comprising:

a first spin valve sensor;

a second spin valve sensor; and

at least one flux guide, wherein a flux generated by the at least one flux guide is shared between the first spin valve sensor and the second spin valve sensor to thereby reduce a sensitivity of the spin valve sensor apparatus.

4. The spin valve sensor apparatus of claim 3, wherein the sharing of the flux between the first spin valve

sensor and the second spin valve sensor reduces a flux injection efficiency of the spin valve sensor apparatus.

5. The spin valve sensor apparatus of claim 3, wherein the at least one flux guide includes a top flux guide and a bottom flux guide.

6. The spin valve sensor apparatus of claim 5, wherein the top flux guide is positioned between the first spin valve sensor and the second spin valve sensor, and the bottom flux guide is positioned nearest a side of the second spin valve sensor that is furthest away from the first spin valve sensor.

7. The spin valve sensor apparatus of claim 3, further comprising planars, wherein the second spin valve sensor is positioned on the planars.

8. A method of making a reduced sensitivity spin valve sensor apparatus, comprising:

providing a spin valve sensor; and

providing a pair of magnetic shields, wherein a spacing between the spin valve sensor and each magnetic shield of the pair of magnetic shields is reduced relative to standard spin valve sensor apparatus to thereby reduce a flux injection efficiency of the spin valve sensor.

9. The method of making a reduced sensitivity spin valve sensor apparatus of claim 8, wherein the spacing

between the spin valve sensor and each magnetic shield is reduced by decreasing a thickness of an insulating layer between the spin valve sensor and the magnetic shields.

10. A method of making a spin valve sensor apparatus, comprising:

providing a first spin valve sensor;

providing a second spin valve sensor; and

providing at least one flux guide, wherein a flux generated by the at least one flux guide is shared between the first spin valve sensor and the second spin valve sensor to thereby reduce a sensitivity of the spin valve sensor apparatus.

11. The method of making a spin valve sensor apparatus of claim 10, wherein the sharing of the flux between the first spin valve sensor and the second spin valve sensor reduces a flux injection efficiency of the spin valve sensor apparatus.

12. The method of making a spin valve sensor apparatus of claim 10, wherein providing the at least one flux guide includes providing a top flux guide and a bottom flux guide.

13. The method of making a spin valve sensor apparatus of claim 12, wherein providing the top flux guide includes positioning the top flux guide between the first spin valve sensor and the second spin valve sensor, and providing the bottom flux guide includes positioning the

bottom flux guide nearest a side of the second spin valve sensor that is furthest away from the first spin valve sensor.

14. The method of making a spin valve sensor apparatus of claim 3, further comprising providing planars, wherein providing the second spin valve sensor includes positioning the second spin valve sensor on the planars